Technical Specifications for the Construction of Buildings and Outdoor Areas of the EEF 2018 Central Venue (FEFU campus)

St Petersburg
2018

1. General provisions

The objective of the work performed by contractors to assemble, maintain, and dismantle temporary facilities in buildings and at outdoor areas at the Central Venue of the Eastern Economic Forum 2018 (hereinafter the EEF 2018 CV) is to support the staging of the Eastern Economic Forum (hereinafter the EEF) in full and within the specified deadlines.

Contractors that undergo certification for compliance with the international standards of the ISO 9000 (ISO 9001-2008) series may be permitted to perform work at the EEF 2018 CV.

Before performing work regulated by Order No. 624 of the Russian Ministry for Regional Development dated 30 December 2009, a company must produce an original extract from the register of members of the self-regulatory organization (SRO) using the form approved by Order No. 58 of the Federal Environmental, Industrial and Nuclear Supervision Service dated 16 February 2017 confirming the right to perform types of work that affect the safety of permanent facilities.

Technical documentation for permission to perform work involving the installation, technical maintenance, and dismantling of temporary facilities at buildings and outdoor areas of the EEF 2018 Central Venue provided by contractors to ensure the staging of the EEF 2018

In accordance with the "Regulation on permission for contractors to perform work involving the installation, dismantling, and technical maintenance of temporary facilities at buildings and outdoor areas of the EEF 2018 Central Venue", contractors must provide the EEF 2018 Technical Directorate[1] with the following technical documents for permission to perform work involving the installation, technical maintenance, and dismantling of EEF 2018 facilities, including power grids and utility lines, in the buildings and outdoor areas of the EEF 2018 CV:

1. The approved working design, including:
    - The title page;
    - The terms of reference;
    - An explanatory note;
    - The working drawings and electrical diagrams (specifying maximum heating for each type of electrical equipment as per their data sheets);
    - Design project;
    - Specifications for materials, components, nodes, and equipment;
    - Fire safety measures (including technical and organisational);
    - Technical specifications for all types of work;

The working design, including the design project, must be approved by the Customer and presented to the Roscongress Foundation by the deadlines[2] specified in the "Regulation on permission for contractors to perform work involving the installation, dismantling, and technical maintenance of temporary facilities at buildings and outdoor areas of the EEF 2018 Central Venue",

2. A set of documents for obtaining a clearance certificate;
3. The working design in electronic PDF format

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[1] Here and hereinafter for the purposes of the 'Far East Street' Exhibition (hereinafter FES), the Technical Directorate is the FES Technical Directorate.

[2] Here the design project for the 'Far East Street' Exhibition (hereinafter referred to as FES), as part of the construction of outdoor areas of the central venue of the Eastern Economic Forum in 2018, is sent to the head of the working group in charge of organizing the Exhibition.

All technical documents must be approved by the Customer and executed in accordance with the requirements of the Unified Design Documentation System (UDDS).

2. Contractor work requirements

2.1. The contractor must perform the installation/dismantling work of contractors in accordance with the "Work schedule for the temporary construction of buildings and outdoor areas on the FEFU campus to hold the Eastern Economic Forum in 2018 (EEF 2018 Central Venue)".

2.2. Contractors' vehicles must obtain entry passes at the Accreditation Centre to enter the grounds of the EEF 2018 CV when performing installation work. When exiting the territory of the EEF 2018 CV during dismantling work, contractors' vehicles must obtain permission to remove the property (equipment) owned by the contractor in accordance with a way-bill.

All vehicles must adhere strictly to traffic rules when in operation. Vehicles at the EEF 2018 CV must not exceed 20 km/h. The maximum single axle load per vehicle must not exceed 10 tonnes.

Vehicles are not permitted to operate inside buildings.

The speed of special vehicles (hoisting gear) within the buildings must not exceed 5 km/h. Special vehicles may only enter the buildings for loading/unloading operations and to lift equipment in accordance with the "Work schedule for the temporary construction of buildings and outdoor areas on the FEFU campus to hold the Eastern Economic Forum in 2018 (EEF 2018 Central Venue)" and with permission from the building administrator.

Prior to the start of work using hoisting gear and cargo trolleys, the contractor must provide Technical Directorate representatives with a diagram indicating the work area using these devices and gear and ensure it is fenced off. Before starting work, the contractor must prepare a standard form statement on the current condition of the loading and unloading area and present the work area to Technical Directorate representatives upon completion of the work.

Vehicles may not be parked in the exhibition buildings.

During loading/unloading operations, vehicles must turn their engines off.

Vehicles may not be parked on the territory of the EEF 2018 CV.

2.3. All installation work must be performed in compliance with the existing Safety Regulations (PTB), Rules for the Technical Operation of Consumer Electrical Installations (PTEEP), Rules for the Installation of Electrical Installations (PUE), Rules for Fire Prevention in the Russian Federation (PPR), Technical Regulations on Fire Safety Requirements (FZ-123), Construction Standards and Rules (SNiP), Standard Occupational Safety Instructions for Workers Performing Climbing Work (TOI PO-055-2003), Occupational Safety Rules (POT) (Order No. 328n of the Russian Ministry of Labour dated 24 July 2013), Occupational Safety Rules for Elevated Work and the Requirements of Technical Solutions and Working Drawings of Approved Working designs (Schematics).

All installation (dismantling) work must be performed in accordance with the requirements of SNiP 12-03-2001 "Construction Safety Requirements", including the installation of protective (warning) fencing and safety signs in the zones of permanently operating and potentially hazardous production factors.

2.4. Temporary facilities must only be built after the construction site has been marked off on the basis of installation plans checked in conjunction with EEF Technical Directorate representatives.

2.5. Temporary facilities must only be built after the construction site has been accepted by the contractor with the preparation of a statement with the attachment of photos of any deviations. The handover of the construction site shall be handled and organized by the following EEF Technical Directorate representatives:

- The administrator;
- An engineering and technological oversight expert (technical administrator).

2.6. Upon completion of dismantling work, the contractor shall hand over the construction site to the EEF Technical Directorate. The construction site shall be accepted based on an acceptance statement with representatives of the EEF Technical Directorate, FEFU campus, and the contractor in attendance. In the event of any deviations, they must be rectified by the contractor independently or the cost of repair (material damage) shall be reimbursed to the FEFU maintenance company.

2.7. The construction site shall be considered to have been delivered provided that:

- the deviations identified are eliminated by the contractor or the latter reimburses the FEFU maintenance company for the cost of repair (material damage);
- payment documents are attached to the construction site acceptance statement;
- the construction site acceptance statement is signed by all parties.

2.8. Prior to starting work, a representative of the contractor appointed by the head of the company in charge of the work shall compare the construction plan with the general building plan together with representatives of the EEF Technical Directorate (administrator and engineering and technological oversight expert (technical administrator)). If any discrepancies that might disrupt the work are identified, the EEF Technical Directorate must be contacted immediately for a proper decision to be made.

2.9. Temporary facilities must be built only on a marked off construction site with aisles between construction units to be left unencumbered.

It shall be prohibited to store boxes, containers, building materials, waste, tools, or equipment in the aisles. If the location of temporary structures does not match the general marked off area, the contractor must dismantle the structures and reinstall them at its own expense.

No part of the structure may extend beyond the boundaries of the dedicated construction site accepted by the contractor.

2.10. The entire area built up at the FEFU campus buildings must be covered with a floor covering. Special tape with an adhesive layer may be used to hold the floor coverings in place. The adhesive tape should not leave marks on the floor after it has been removed.

2.11. The height of temporary facilities and premises in the outdoor areas of the EEF 2018 CV must comply with the technical arrangements adopted in the working design for construction. The maximum permissible height of temporary facilities on the premises of in the buildings of the EEF 2018 CV is:

- Building A – 3.5 metres (on Level 4 under the balcony – 2.5 m, central stand – 3 m);
- Building B – 3.5 metres (on Level 5 – 2.5 m, on Level 6 via the line of the barrier wall – the building height of 3 metres is defined as the given height, but not the maximum);
- Building C – 3.5 metres (on Level 5 – 2.5 m, on Level 6 – 3 m);
- Building D – 3.5 metres;
- Building G – 3.5 metres;
- Building S – 3.5 metres;
- Outdoor area – 4.5 metres.

Certain vertical components of booth exceeding the maximum possible height may be erected in coordination with the EEF Technical Directorate and the Exhibition Department.

The Organizing Committee PROHIBITS the construction of two-storey temporary facilities in the buildings of the EEF 2018 CV.

2.12. When erecting temporary facilities in open areas of FEFU buildings, all enclosed spaces and technical cavities in the walls must have a continuous ceiling enclosure and an attractive appearance. If there are premises with a continuous ceiling in the temporary building design, exhaust and intake ventilation and air conditioning with thermal current discharge

beyond the exterior structures (walls) of existing buildings must be installed to ensure a comfortable environment. A calculation of the heat emitted by the equipment of a temporary facility must be part of the HV section of the project.

2.13. If a continuous ceiling or any other structures are installed that separate new temporary areas (rooms, zones, booths, etc.) inside the buildings of the FEFU campus or cover the automatic firefighting systems placed above, spaces under such ceilings and structures must be protected with additional automatic firefighting systems depending on the standard requirements (including an automatic fire alarm installation and (or) fire extinguishing installation (including modular ones), accordingly). These additional automatic fire protection systems shall not have to be installed if the ceiling and other structures have perforated regular patterns, with perforation covering at least 40% of the area of the ceiling and other structures. The minimum size of each perforation in any section must be at least 10 mm and the thickness of the ceiling or other structure must not be more than three times the perforation cell size.

2.14. Only tempered glass may be used, and at a height exceeding 1.8 m from the level to the upper edge of the erected facility, only Triplex glass may be used.

2.15. The walls of temporary facilities and any advertising demonstration vehicles must be stable and pose no threat to the life and health of third parties, and the frameworks and components of the walls and other structures containing combustible materials must be fire-proofed. The structures of suspended ceiling frameworks must be made entirely from non-combustible materials. The contractor bears responsibility for the safe installation of any structures and must be able to confirm safety if needed. Temporary facilities erected by a contractor must not be fastened to adjacent temporary facilities. If the distance from the ceiling to the top of temporary walls, partitions, and other structures is 0.6 m or less, additional fire alarm units must be added as part of automatic fire alarm installation.

2.16. **Fastening of temporary facilities and structures to stationary walls and the floor of FEFU campus buildings shall not be permitted.**

2.17. Construction work both at the EEF 2018 CV and inside buildings must be performed from units and components with a high degree of readiness that were preassembled and pre-painted at the contractor's production facilities. Only fire-proofing, jointing of prefabricated elements, sealing and painting of joints may be performed in the buildings of the FEFU campus with the advance covering of the aisle floors with a drop cloth or membrane.

The use of stationary circular saws, file board sanders not equipped with dust extractors, open fires or welding work shall not be permitted.

2.18. The use of combustible building and finishing materials shall not be permitted. Where warranted, when materials are used which are different from non-combustible materials in terms of their properties, the following requirements should be met (in any case, the fire hazard class of materials for finishing rooms and escape routes must not exceed the ratings set in tables 28 and 29 of FZ-123 (depending on the type of escape route and the purpose of the room)).

Contractors may not use building materials to manufacture walls or ceilings or to fill suspended ceilings in temporary facilities that have a higher fire hazard than classes G1, V1, D2, T2, RP1 (or have not been fire-proofed to reach the given indicators). The frames of suspended ceilings must only be made from non-combustible materials. Only non-combustible materials (of the NG class) may be used for soundproofing and thermal insulation.

Contractors may not use building materials as a floor covering in temporary facilities with a higher fire hazard than classes G1, V1, D2, T2, RP1, or V1, D2, T2, RP1 (for carpeting), or materials not fire-proofed to reach the given indicators.

When textile finishing (drapery) is required, the fabrics must be flame-proofed to ensure the following characteristics: flash-resistant cloths (according to GOST R 50810-95), fabrics with moderate smoke generation ability D2 (according to GOST 12.1.044-89), fabrics with moderate toxicity of combustion products T2 (according to GOST 12.1.044-89), and fabrics not classified as inflammable substances (according to GOST R 53294-2009). Use of Kendal fabrics or fabrics made from Trevira CS fibre (or their equivalent) shall not be permitted.

Fire certificates and statements on the fireproofing of materials confirming the classification of building materials and their ability to be used must be available at each temporary facility. To confirm fireproofing, contractors must submit fireproofing statements to the EEF 2018 Technical Directorate. The use of previously fireproofed materials that have already been utilized at other events shall not be permitted (since the preservation of fireproofing characteristics is influenced by a wide variety of factors, including humidity levels, temperature, mechanical impact, and other storage conditions).

Deciduous trees and conifers may only be used with wet roots. Bamboo, reed, straw, bark, peat, and similar materials may be used only following special treatment.

2.19. The structure of staircases, ramps, steps, and footbridges must comply with safety requirements. All staircases, elevated platforms, and zones must have banisters that rise at least 1.2 m above floor level and have at least upper, middle and lower hand rails. The staircase barriers and banisters must be continuous, fitted with hand rails, and have a load bearing capacity of at least 0.3 kNm. Platforms must be designed to sustain a load of 2.0 kNm per sq. m and pass static tests. The height of single-level platforms must not exceed 0.22 m. The pitch of stairs must not exceed 1:1, the tread width must be at least 25 cm and the step height no more than 22 cm. The width of staircase flights and landings must be at least 1.2 m, though in justified cases a width reduction to 0.9 m shall be permitted. **Winding or curving staircases shall not be permitted.** The difference in the floor elevation on walkways must be at least three steps or across a ramp (with a maximum slope of 1:6). The width of doors (or door apertures) must be at least 0.8 m (for rooms with 50 or more people – at least 1.2 m), while they must be at least 1.9 m in height. The height of escape routes, including when additional structures are installed, must not be less than 2.2 m.

Escape routes must be fitted with elements of photo luminescent evacuation systems in accordance with the provisions of GOST R 12.2.143-2009 “Labour Safety Standards: Photo Luminescent Evacuation Systems. Control Requirements and Methods”.

To ensure safe evacuation and on-site fire safety and to justify the dimensions of the escape routes, the fire risk is calculated on the basis of Article 6 and Article 53 of Federal Law 123 “Technical Regulations of Fire Safety Requirements”.

2.20. While building an area with temporary facilities, the contractor must ensure that the walls and partitions bordering on the aisles where EEF 2018 participants may be situated are attractive in appearance by using décor, displays, etc. The partitions of the facilities bordering on neighbouring premises must look neutral and be in line with the design solutions of nearby facilities. The rear surfaces of the booths at Level 6 of Building B facing the ‘second-level space’ should be branded. Graphic objects should be arranged on such surfaces taking into account the location of the columns along the ‘second-level space’ boundary line.

2.21. Interior premises, buildings, and the fitting out of FEFU campus outdoor sites must not be damaged, stained, or otherwise altered. **Painting, wallpapering, and the adhesion of any materials to the wall surfaces and the equipment of FEFU campus buildings shall be forbidden.** Pedestals and columns located on construction sites may be covered to the permitted height, provided they are not damaged.

2.22. **If a foundation or podium is required, it must be installed above the floor level. Digging of pits is prohibited. It is also forbidden to paint the floors of buildings and the roadway of outdoor areas.**

2.23. If mortar needs to be used, it must be mixed and applied on metal or plastic sheets, or on a tarpaulin.

Mortar may not be applied on the floor of buildings or the road surface.

2.24. If oil or similar substances are spilled on the floor surface or roadway, they must be promptly removed. Carpets and carpeting must be laid in accordance with the safety rules and must not protrude beyond the site boundaries. Only a polyethylene or polypropylene adhesive tape may be used for the adhesion of the carpet to the floor or road surface. Such materials should not leave traces.

2.25. When using loose materials (earth, sand, etc.), access doors or apertures in buildings and outdoor areas of the FEFU campus must be covered and protected from dust. Any dust must be removed with suitable detergents.

2.26. Temporary structures may not be hung from roof beams on FEFU campus premises.

2.27. When developing design and décor working designs, the contractor must ensure compliance with all requirements, in particular ensuring that all inscriptions applied on walls of temporary facilities, logos, and company names do not exceed the permitted height and look attractive from any angle.

2.28. **Sound equipment may not be used in temporary facilities.**

2.29. When designing temporary facilities in outdoor areas of the FEFU campus, the structural integrity of the temporary facility must be maintained when it is exposed to wind loads created by air flows at a speed of at least 30 m/sec.

Drilling asphalt pavement in outdoor areas of the FEFU campus is PROHIBITED.

Facilities erected in outdoor areas of the EEF 2018 CV must be fastened to the surface **exclusively using weights**.

2.30. When developing the working design and installing facilities in the buildings of the FEFU campus, the contractor must not exceed the following maximum admissible floor loads:

- Building A – 250 kg/sq. m.;
- Building B – 250 kg/sq. m.;
- Building C – 250 kg/sq. m.;
- Building D – 250 kg/sq. m.;
- Building G – 250 kg/sq. m.;
- Building S – 250 kg/sq. m.;

2.31. 'Exit' lighting indicators must be installed: in all the halls (regardless of capacity) and in rooms where 50 or more people may gather at one time – above emergency exits; over emergency exits from the building's floors that lead directly outdoors or to a safe zone. Evacuation signs must be hung (at a height of at least 2 m), indicating the direction of movement, in corridors longer than 50 metres. Evacuation fire safety signs must be installed throughout the corridors at a distance of at least 25 metres from one another as well as where corridors turn.

2.32. Facilities in buildings and in outdoor areas of EEF 2018 CV must be equipped with air-conditioning systems based on mobile air-conditioners and wall or cartridge split air conditioning systems. The efficiency of installed air conditioning systems must be corroborated with relevant calculations in the explanatory note to the working design. The air ducts of the air conditioning system must be placed at a distance of at least 100 mm from cabling and wiring, and air ducts may not be crossed by these utility services.

3. **Requirements for electrical installation work**

3.1. Electrical work must be performed in accordance with the PUE, PTEEP, and POT RM requirements. In order to perform electrical work during installation, dismantling, and technical maintenance at EEF 2018 premises and facilities, the contractor must an extract from the register of members of the self-regulatory organization (SRO) using the form approved by Order No. 58 of the Federal Environmental, Industrial and Nuclear Supervision Service dated 16 February 2017 confirming the right to perform types of work that affect the safety of permanent facilities.

3.2. The contractor's electrical personnel must have an electrical safety permission qualification level of at least 3, while the person in charge of electrical installation work (the installation of electrical equipment) must have a qualification of at least 4. All electrical personnel must carry qualification confirmation documents.

3.3. Measures to prevent electric shock must be taken to ensure electric safety. In particular, during electrical work, the TN-S scheme must be implemented (neutral protective and neutral conductor circuits must be separated throughout the electrical schematics).

3.4. Electrical schematics must be developed for each facility indicating the cross-section of the input cable and wires extending away from the switchboard (electric service panel), the full list of electrical power and lighting fittings, as well as the voltage and capacity of connected loads. **All installed electrical equipment must have technical datasheets (or other documents indicating the datasheet values of maximum heating for each piece of electrical equipment).**

3.5. Each room, facility or zone with electrical equipment must be equipped with an electric board with a residual current device (fault current – 30 mA).

3.6. The lighting and electrical equipment switches of any room or facility must be removed from lockable rooms. Full access must be provided to power distributing input devices and other electrical equipment.

3.7. Copper conductors must be used in electric cabling and wiring. Only ng-LS, FRLS and HRLS class cables and electric wires (Low Smoke, low-gas fire-resistant wiring) with a cross-section of at least 0.75 sq. mm. may be used.

3.8. Wiring located lower than 2.5 m above floor level must be contained in pipes or cable channels. Wires and cables routed along the floor of buildings and over the roadway of outdoor areas must be covered with plastic or rubber floor cable channels and rubber bridging boards, which must not obstruct walking or driving but must also prevent insulation damage. Cables may not be routed in buildings along and across the main aisles between development areas as per GOST 31565-2012 “Cable products. Fire safety requirements”.

3.9. Electrical work may not be performed using bare joints, bunch strands, and terminal blocks (uncovered switching and splicing). All joints of the electric wiring must be made using electric connectors. The plugs must conform to the German standard (Euro standard).

3.10. All electric circuits must be protected with automatic switches or safety fuses to safeguard against current surges.

3.11. During installation work, stationary technological outlets available in both buildings and open areas of the EEF 2018 CV must be used for the temporary connection of tools. These outlets may not be used during Forum events.

The allocated electric power shall be limited to 0.16 KW per 1 sq. m of buildings for temporary facilities and structures erected in the buildings and outdoor areas of the FEFU campus.

3.12. Types of power connectors in small engineering channels (floor boards) of the FEFU campus buildings:

- Power socket (outlet); number of poles: 3R+RE+I; nominal current: 32 A; nominal voltage: 380 V.
- Power socket (outlet); number of poles: 3R+RE+N; nominal current of the power connector: 125 A; actual current: 100 A nominal voltage: 380 V.
- The EEF 2018 Technical Directorate must coordinate the location of power connectors with the FEFU technical services based on a written request from the contractor.

3.13. To connect the equipment of temporary facilities, the power connector must be fed to the building area via small engineering channels. Each room, facility, or zone that has electrical equipment must be equipped with a switchboard having a RCD. The number of switchboards on a temporary development site depends on the technical characteristics of the power connectors (see clause 3.12) in engineering channels required for connection to the power supply system of buildings A, B, C, D, G, S, and the sites where outdoor temporary structures are to be placed. In addition, all technological connections of temporary networks to FEFU networks must be performed in the presence of representatives from the FEFU operating organization.

3.14. Before the voltage is fed to the power supply system of a temporary facility, representatives of the EEF 2018 Technical Directorate and electric personnel of the FEFU campus along with electricians of the temporary facility shall check the readiness of the

temporary power supply system and compliance with the mounted electric power consumers (equipment, devices, switchboards, instruments, etc.). The following must also be checked:

- conformity of the facility's electrical equipment parameters with those presented earlier in the working design for development;
- Testing reports for the electrical installations, including:
  - insulation resistance testing of electrical wires and cables;
  - verification of the 'zero-phase' circuit in electrical installations with rated voltage up to 1 kV with the TN system (measurement of impedance of the zero-phase loop with the subsequent detection of short-circuit current);
  - testing (checking) of residual current devices (RCDs);
  - checking the operation of the circuit breaker releases;
  - checking to ensure there is a circuit between the grounded equipment and the grounding switch;

After the readiness of the temporary facility's power supply system is checked, a decision shall be made about whether to connect it to the functional electrical grids of the FEFU campus. Prior to connection, a **Certificate on the Delineation of the Balance Sheet Attribution of Networks and Operational Responsibility of the Parties** must be signed.

3.15. If the contractor's electrical personnel fail to observe the effective PEEP, PUE, PTB or POT standards (Order No. 328n of the Russian Ministry of Labour dated 24 July 2013) during electrical work, representatives of the EEF 2018 Technical Directorate may prohibit the electrical work with the preparation of a Notification using a standard form.

3.16. **Additional electric equipment not indicated in the electrical schematics of the working design for temporary development may not be connected to input equipment without the consent of the EEF 2018 Technical Directorate.**

3.17. For the operation of temporary power supply grids in the technical zones of a temporary facility, unimpeded access to the connection point must be provided where they enter the existing engineering channels.

4. Requirements on low current systems

4.1. When designing low current systems for temporary facilities at the EEF 2018 CV, the contractor must provide power supply to the equipment of its low current systems at temporary facilities from its own switchboards, connecting them to interface points of the functional power supply sources. The interface of temporary power grids with functional power grids must be indicated in the temporary power supply project of the temporary facility, as agreed with the EEF 2018 Technical Directorate and technical maintenance services of the FEFU campus, indicating the total actual power consumption of temporary facilities connected to the functional power grids. The operational responsibility delimitation between the functional power grids and temporarily connected power grids passes over the interface point (connector, terminal, etc.). Operational responsibility for temporary power grids is borne by the company appointed by the Customer of the temporary facilities based on the terms of the contract for the construction of temporary facilities and in accordance with the Electric Installation Code (EIC).

The power supply reliability category for electricity consumers of temporary facilities is set by the Customer of the temporary facility with an indication of the time of possible disruptions in power supply in the event of emergencies. If there is no possibility of power supply disruption (even when an emergency alarm goes off), the power supply of these power consumers must be provided on the basis of the first reliability category (from uninterrupted power supply sources).

For electricity consumers of temporary facilities at the EEF 2018 CV, the following technological solutions need to be provided:

1) two independent electrical feeders;

2) automatic circuit breaker panel with remote monitoring of input feeder condition;

3) True-on-line UPS in the N+1 parallel operation mode with batteries lasting at least 30 minutes under the maximum real consumed power of the temporary facility's equipment.

For the most important power consumers of temporary facilities indicated by the Customer of the temporary facilities (the list of consumers must be agreed with the Customer of the temporary facilities), true-on-line or line-interactive UPS are recommended with batteries lasting at least 30 minutes under maximum real consumed power of the temporary facility's equipment and mandatory use of an overvoltage protector with remote monitoring.

For power consumers not indicated by the Customer of the temporary facilities, line-interactive UPS are recommended with batteries lasting at least 30 minutes under maximum real consumed power of the temporary facility's equipment.

4.2. The design, installation, and technical maintenance of low current systems must be performed by a company holding a certificate of permission to perform such work from a self-regulating organization (SRO).

The work must be performed in strict compliance with the project approved by the EEF 2018 Technical Directorate, technical maintenance services of the FEFU campus, and the Customer.

4.3. The projects for low current systems for temporary developments and facilities of the EEF 2018 CV must be integrated into a single project by the IT team of the Roscongress Foundation and approved by the EEF 2018 Technical Directorate and technical maintenance services of the FEFU campus.

4.4. Unimpeded access to the connection point must be provided for the operation of temporary LAN networks in the technical zones of temporary construction at their interface with the existing engineering channels.

5. Requirements for water supply and drainage systems

5.1. When designing temporary water supply and drainage schemes for temporary facilities, the contractor must ensure the temporary networks are connected to the existing FEFU campus networks. Connection to the existing networks takes place via engineering channels.

Characteristics of the connection points to the existing networks:

- Water supply: DN 15, internal thread;
- Drainage – DN 50.

5.2. Documentation for the installation of water supply and drainage systems must constitute part of the working design of a temporary facility and contain:

- general data;
- equipment specifications;
- key parameters (water consumption and discharge);
- schematics for the temporary water supply and drainage networks.

5.3. **Additional equipment not indicated in the schematics may not be connected to water supply and drainage networks without the approval of the EEF 2018 Technical Directorate.**

5.4. Before connecting water supply and drainage networks of a temporary facility, representatives of the EEF 2018 Technical Directorate and technical maintenance services of the FEFU campus must check the readiness of the system as a whole as well as its connection fittings.

In particular, the conformity of the facility equipment parameters to those specified earlier in the working design must be checked. Prior to connection, the **Certificate on the Delineation of Balance Sheet Attribution of the Networks and Operational Responsibility of the Parties** must be signed.

Work involving the connection of water supply and drainage networks may only be performed by the technical personnel of the FEFU campus.

5.5. Unhindered access to the connection point for the technical personnel of the Roscongress Foundation must be provided for the operation of temporary water supply and drainage networks

in the technical zones of a temporary facility at their interface with the existing engineering channels.

6. Requirements for the cleaning of the premises

6.1. In the process of construction work, the Contractor must clean the premises where work is performed daily (at the end of the work day), which includes:

- collecting and removing waste to a located specified by the Customer.